

I claim:

1. An apparatus for fabricating decoratively shaped writing instruments having a casing,

said apparatus comprising:

a heater unit comprising

a heat source, and

a heating compartment having an opening for inserting and removing the casing,

said heat source providing heat to said heating compartment; and

a shaper unit comprising

a platform having an elongated slot,

an exterior mold assembly attachable to said platform and moveable in said

elongated slot;

an exterior shaping surface coupled to said exterior mold assembly; and

an interior mold insert having an interior shaping surface, said interior mold insert

being attachable to said platform such that the movement of said exterior mold assembly

in said elongated slot moves said exterior shaping surface towards and away from said

interior shaping surface;

wherein the casing is heated in said heating compartment, then the heated casing is placed on

said platform and is compressed between said interior shaping surface and said exterior shaping

surface by movement of said exterior mold assembly in said elongated slot, then the casing is

allowed to cool.

2. The apparatus of claim 1, wherein said exterior shaping surface is removably attachable to said exterior mold assembly.
3. The apparatus of claim 1, further comprising a plurality of exterior mold assemblies and a plurality of exterior shaping surfaces, each of said plurality of exterior shaping surfaces being removably attachable to any one of said plurality of exterior mold assemblies, and wherein said platform has a plurality of elongated slots, each of said plurality of exterior mold assemblies being attachable to any one of said plurality of elongated slots enabling said apparatus to create different decorative shapes.
4. The apparatus of claim 1, wherein said heating compartment further comprises a heating tube having a proximal end and a distal end, said heating tube having an opening at said distal end which provides said opening for inserting and removing the casing.
5. The apparatus of claim 4, wherein said heat source further comprises a heating element wrapped around said heating tube.
6. The apparatus of claim 5, wherein said heat source further comprises an interior insulating tape and an exterior insulating tape, said interior insulating tape being wrapped around the length of said heating tube, said heating element being wrapped around the length of said interior insulating tape, and said exterior insulating tape being wrapped around said heating element.

7. The apparatus of claim 4, wherein said heating compartment further comprises a tubular sleeve, said tubular sleeve being inserted in the interior of said heating tube and extending through said distal opening of said heating tube, wherein, when the casing is inserted in said heating tube, said tubular sleeve is between said casing and the surface of said heating tube.

8. The apparatus of claim 1, further comprising a gauge assembly for measuring the length of the casing inserted in said heating compartment.

9. The apparatus of claim 8, wherein said gauge assembly further comprises a gauge cover and a ruler member, said gauge cover being attached to said heating compartment and said ruler member being slide-able in said gauge cover to measure the length of the casing inserted in said heating compartment.

10. The apparatus of claim 1, wherein said platform further comprises a mold receiving well having side walls, and said interior mold insert further comprises a base having a perimetral surface, said interior shaping surface being attached to said base, wherein said perimetral surface of said base is sized and shaped to fit in said mold receiving well to stabilize said interior shaping surface.

11. The apparatus of claim 10, wherein said perimetral surface of said base has an irregular shape and said side walls of said mold receiving well has a matching irregular shape, wherein said base only fits in said mold receiving well in one position thereby ensuring that said interior shaping surface is properly oriented in said mold receiving well of said platform.

12. The apparatus of claim 1, wherein said exterior mold assembly further comprises a lever arm portion having a lever arm, said lever arm being moveable between a raised position wherein said exterior shaping surface is moved away from said interior shaping surface, and a lowered position wherein said exterior shaping surface is moved towards said interior shaping surface.

13. The apparatus of claim 12, wherein said exterior mold assembly further comprises a locking portion and a moveable portion, said locking portion including an assembly lock mechanism, wherein said assembly lock mechanism locks said locking portion in place on said platform, said lever arm portion connects said locking portion to said moveable portion, and said exterior shaping surface is coupled to said moveable portion.

14. The apparatus of claim 13, wherein said exterior mold assembly further comprises a rear foot member and a rear pivot member, said rear pivot member coupling said rear foot assembly to said lever arm portion, and said rear foot assembly and said rear pivot member being part of said locking portion of said exterior mold assembly.

15. The apparatus of claim 14, wherein said rear foot member further comprises a vertically extending rear trunk member, a laterally extending rear lower flange extending from said rear trunk member near the bottom of said rear trunk member, a laterally extending upper flange extending from said rear trunk member above said rear lower flange, said laterally extending rear upper and lower flanges defining a rear platform engaging slot, wherein said rear platform engaging slot

couples said rear foot member to said platform.

16. The apparatus of claim 14, wherein said exterior mold assembly further comprises a mold holder portion having a main body portion and a front foot member, said front foot member being coupled to said exterior shaping surface, said mold holder portion being part of said moveable portion of said exterior mold assembly.

17. The apparatus of claim 16, wherein said exterior mold assembly further comprises a pivot plate, a front pivot member and a middle pivot member, said middle pivot member connecting said lever arm portion to said pivot plate, and said front pivot member connecting said main body of said mold holder member to said pivot plate.

18. The apparatus of claim 17, wherein said front foot member further comprises a vertically extending front trunk member, a laterally extending front lower flange extending from said front trunk member near the bottom of said front trunk member, a laterally extending front middle flange extending from said front trunk member above said front lower flange, and a laterally extending front upper flange extending from said front trunk member above said front middle flange, said laterally extending front upper and middle flanges defining an insert engaging slot, and said laterally extending front middle and lower flanges defining a front platform engaging slot, wherein said insert engaging slot couples said exterior shaping surface to said exterior mold assembly and said front platform engaging slot couples said front foot member to said platform.

19. The apparatus of claim 16, wherein said exterior mold assembly further comprises a finger engaging member having a finger engaging surface, said finger engaging member being coupled to said main body of said mold holder portion, wherein pushing said finger engaging surface exerts pressure on said lock mechanism of said exterior mold assembly to lock said exterior mold assembly in place on said platform.

20. An apparatus for fabricating decoratively shaped writing instruments having a casing, said apparatus comprising:

- a heater unit comprising

- a heating tube having a distal opening;

- a heat source providing heat to said heating tube;

- a tubular sleeve having a distal opening inserted in the interior of said heating tube and extending through said distal opening of said heating tube,

- a cover surrounding said heating tube to protect against touching of said heating tube and heat source,

- a distal end cap having a cover opening attached to said cover, the distal opening of said tubular sleeve being coupled to said cover opening such that a writing instrument casing can be inserted and removed from said heating tube through said cover opening;

- a gauge assembly comprising,

- a gauge cover attached to said cover of said heater unit, and

- a ruler member slideable in said gauge cover to measure the length of the casing inserted in said heater unit; and

a shaper unit comprising

a platform having a plurality of elongated slots and a mold receiving well having side walls,

an interior mold insert having a interior shaping surface, said interior mold removably insertable in said mold receiving well of said platform;

a plurality of exterior mold assemblies, each of said plurality of exterior mold assemblies being attachable to any one of said plurality of elongated slots of said platform, each of said plurality of exterior mold assemblies comprising a rear foot member lockable to said platform, a lever arm, a rear pivot member connecting said lever arm to said rear foot member, a pivot plate, a middle pivot member connecting said lever arm member to said pivot plate, a front foot member, a front pivot member connecting said front foot member to said pivot plate and an exterior shaping surface coupled to said front foot member, said front foot member being moveable in said one of said plurality of elongated slots to which said exterior mold assembly is attached, wherein said lever arm is moveable between a raised position wherein said front foot member and said coupled exterior shaping surface is moved away from said interior shaping surface, and a lowered position wherein said foot member and said coupled exterior shaping surface is moved towards said interior shaping surface;

wherein the writing utensil casing is heated in said heater unit, then the heated casing is placed on said platform and is compressed between said interior shaping surface and said exterior shaping surface by movement of said plurality of exterior mold assemblies in said plurality of said elongated slots.

21. A method of making a decorative writing utensil comprising the steps of:

selecting a slot on a platform in which to attach an exterior mold assembly having an exterior shaping surface, and a lever arm moveable between a raised position in which said exterior shaping surface is retracted and a lowered position in which said exterior shaping surface is extended;

inserting said exterior mold assembly in said selected slot;

putting said lever arm of said exterior mold assembly in the raised position;

inserting an interior mold assembly having an interior shaping surface in said platform;

inserting a writing instrument casing in a heater unit;

heating said writing instrument casing in said heating unit;

removing said heated writing instrument casing from said heating unit;

placing said heated writing instrument casing on said platform near said interior shaping surface;

lowering said lever arm of said exterior mold assembly to move said exterior shaping surface toward said interior shaping surface and compress said writing instrument casing between said interior and said exterior shaping surfaces;

letting said writing instrument casing cool; and

raising said lever arm of said exterior mold assembly to move said exterior shaping surfaces away from said interior shaping surfaces to release the writing instrument casing.

22. The method of claim 21, wherein said steps of inserting said exterior mold assembly, putting said lever arm in the raised position; inserting an interior mold assembly in said platform; lowering



said lever arm of said exterior mold assembly; and raising said lever arm of said exterior mold assembly are performed manually.

23. The method of claim 22, wherein said steps of inserting a writing instrument casing in a heater unit; and removing said heated writing instrument casing from said heating unit are performed manually.

H:\Word Processing\3057 - Bencil, Ind9 - Home Factory Utility Patent Application.doc